

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in view of the above amendments and in light of the following discussion, is respectfully requested.

Claims 70, 78, and 84-85 are currently amended. Support for the amendment of Claims 70 and 78 is self-evident. Support for the amendment of Claims 84-85 can be found in the published application at paragraphs [0035], [0040], [0044], and [0046], for example. No new matter is introduced.

Claim 84 is rejected under 35 U.S.C. § 103(a) as unpatentable over Sakai (JP 63-7234) in view of Futamura (U.S. Patent No. 5,951,884). Claim 85 is rejected under 35 U.S.C. § 103(a) as unpatentable over Ishiwata (JP 8-290,332) in view of Futamura and Sakai. Claims 64-67, 69-81, and 83 are allowed. The indication of allowed subject matter is greatly appreciated.

The Applicants concurrently file an Information Disclosure Statement listing CN 1272144A which was cited in an Office Action of the Chinese Patent Office. In compliance with 37 CFR 1.98(a)(3), a copy of this reference is filed together with a copy of the Chinese Office action and an English language translation thereof.¹ Accordingly, the Applicants respectfully request that CN 1272144A be acknowledged as having been considered in the next Office Action.

Claims 70, 78, and 85 are amended to correct informalities discovered by the Applicants while preparing this response. No new matter is introduced.

The Office Action states that “Applicant’s distinction of a ‘deposition electrode’ and a ‘melting electrode’ do not distinguish between an ordinary electrode for discharge machining

¹ See MPEP § 609.04(a)III, “Where the information listed is not in the English language, but was cited in a search report or other action by a foreign patent office in a counterpart foreign application, the requirement for a concise explanation of relevance can be satisfied by submitting an English-language version of the search report or action which indicates the degree of relevance found by the foreign office. This may be an explanation of which portion of the reference is particularly relevant, to which claims it applies, or merely an “X”, “Y”, or “A” indication on a search report.”

that partially melts during the electrical discharge.” Amended Claims 84 and 85 clarify that the *deposition electrode* is a molded electrode configured to *deposit a deposit material on the workpiece*, and the *melting electrode* is a solid material electrode such that *none of the solid material is deposited* on the workpiece.

Turning to the applied references, Figure 1 of Sakai illustrates a divided electrode (24) “for dividing work by the connection between the electricity feeding plate (36) and the electricity feeding rod (48).”² However, Sakai does not suggest or disclose a deposition electrode configured to deposit a deposit material on a workpiece and a melting electrode that is a solid material electrode, such that none of the solid material is deposited on the workpiece.

Sakai describes a divided electrode that divides work between a feeding plate and a feeding rod. Sakai is also silent with respect to the composition of the electrodes. However, Sakai does refer to the individual electrodes by the same reference numeral (24), which implies the electrodes (24) are similarly composed. By comparison, amended Claims 84 and 85 recite a deposition electrode and a melting electrode each of which include different materials. Accordingly, Sakai does not suggest or disclose all of the features of amended Claims 84 and 85.

Futamura fails to cure the deficiencies of Sakai. Figure 3 of Futamura illustrates two electrodes (11, 11) located an equal distance from a workpiece (2).³ Futamura is silent to the composition of the electrodes (11, 11), but does describe that the electrodes (11, 11) are brought close to the workpiece (2) in synchronism such that the workpiece (2) may be machined simultaneously.⁴ However, Futamura does not suggest or disclose a deposition electrode configured to deposit a deposit material on a workpiece and a melting electrode that

² See Sakai the English abstract, second paragraph, lines 12-15.

³ See Futamura at col. 3, lines 43-46.

⁴ See Futamura at col. 3, line 66 - col. 4, line 3.

is a solid material electrode, such that none of the solid material is deposited on the workpiece.

Like Sakai above, Futamura describes a set of electrodes which are silent to composition yet identical in function. By comparison, amended Claims 84 and 85 recite a deposition electrode and a melting electrode which have different materials and different functions. Accordingly, Futamura does not suggest or disclose all of the features of amended Claims 84 and 85.

Ishiwata fails to cure the deficiencies of Sakai and Futamura. Figure 1 of Ishiwata illustrates a machining head (7) which holds a single electrode (11).⁵ Ishiwata also describes an electrode changer (79) that supports a large amount of electrode holders to be mounted and demounted on the machining head (7).⁶ However, Ishiwata does not suggest or disclose a deposition electrode configured to deposit a deposit material on the workpiece and a melting electrode that is a solid material electrode, such that none of the solid material is deposited on the workpiece.

Ishiwata describes an electric deposition machine with a single removable head. A single removable head is not equivalent to an electric spark machine that includes a deposition electrode and a melting electrode as recited in amended Claims 84 and 85. Accordingly, Ishiwata does not suggest or disclose all of the features of amended Claims 84 and 85.

Based on the foregoing, even the combined teachings of Sakai, Futamura, and Ishiwata do not suggest or disclose all of the features of amended Claims 84 and 85. Accordingly, the Applicants respectfully submit that amended Claims 84 and 85 are in condition for allowance.

⁵ See Ishiwata at the English abstract, paragraph 2, lines 2-4.

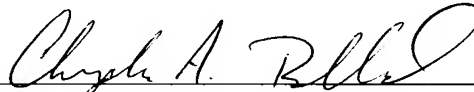
⁶ See Ishiwata at the English abstract, paragraph 2, lines 5-7.

For the reasons discussed above, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. Therefore, a Notice of Allowance for Claims 64-67, 69-81, and 83-85 are earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better condition for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below-listed telephone number.

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